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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/655,862	09/06/2000	OSAMU YUKI	35.C14771	9665

5514 7590 04/13/2006

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EXAMINER

JERABEK, KELLY L

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/655,862	Applicant(s) YUKI ET AL.	
	Examiner Kelly L. Jerabek	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8 and 12-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-8 and 12-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 1/23/2006 have been fully considered but they are not persuasive.

Response to Remarks:

Applicant's arguments regarding independent claims 12-15 (Amendment page 8) state that the Neter patent does not disclose different size pickup areas as required by the claims. Applicant's arguments state that since the Neter reference discloses that a 4 X 4 group of pixels is first read in block (250) and then successive 4 X 4 blocks are then read and processed in blocks (266,268 and 270) there is no difference in the number of pixels which are read for successive areas as claimed. The Examiner respectfully disagrees. It is true that the Neter patent discloses that a 4 X 4 group of pixels is first read in block (250) and then successive 4 X 4 blocks are then read and processed in blocks (266,268 and 270). **However, Neter also discloses an intermediate block (253) in which the individual colors (R, G, B) are summed, amplified and output individually and in sequence (col. 11, line 57-col. 12, line 8).** The Examiner is reading the Neter patent on the claims as follows.

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Neter discloses in figures 2 and 8-10 an image pickup apparatus (122), comprising: an image pickup area (CMOS image sensor) having a plurality of pixels (190,192,194,196); a read circuit (240) having a first read-out mode **(256,258) for reading signals of pixels (G) contained in a first image pickup area (corresponding to G pixels)** in said image pickup area, through addition of n (8) pixels, and having a second read-out mode **(252,254) for reading signals of pixels (R) contained in a second image pickup area (corresponding to R pixels) smaller than the first image pickup area**, through addition of m (4) pixels with addition; and an exposure control circuit (166,156) which comprises an amplifier circuit which is arranged to control an amplification factor of the signals read out from the first (G) and second (R) image pickup areas respectively, in accordance with the first and second read-out modes (col. 11, line 33-col. 12, line 37). **Neter states that the acts of block (253) are performed in a sequence wherein the read circuit (240) sums, amplifies and outputs a red value (second read-out mode) and then sums, amplifies and outputs a green value (first read-out mode) and then sums, amplifies and outputs a blue value (col. 12, lines 4-8).** Therefore, it can be seen that two different sized areas (corresponding to the red value read out area (4) and the green value read out area (8)) are designated and subjected to a readout thereby performing partial signal reading.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 12-15, 2-6, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Neter US 6,888,568.

Re claim 12, Neter discloses in figures 2 and 8-10 an image pickup apparatus (122), comprising: an image pickup area (CMOS image sensor) having a plurality of pixels (190,192,194,196); a read circuit (240) having a first read-out mode (256,258) for reading signals of pixels (G) contained in a first image pickup area (corresponding to G pixels) in said image pickup area, through addition of n (8) pixels, and having a second read-out mode (252,254) for reading signals of pixels (R) contained in a second image pickup area (corresponding to R pixels) smaller than the first image pickup area, through addition of m (4) pixels with addition; and an exposure control circuit (166,156) which comprises an amplifier circuit which is arranged to control an amplification factor

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of the signals read out from the first (G) and second (R) image pickup areas respectively, in accordance with the first and second read-out modes (col. 11, line 33-col. 12, line 37). Neter states that the acts of block (253) are performed in a sequence wherein the read circuit (240) sums, amplifies and outputs a red value (second read-out mode) and then sums, amplifies and outputs a green value (first read-out mode) and then sums, amplifies and outputs a blue value (col. 12, lines 4-8). Therefore, it can be seen that two different sized areas (corresponding to the red value read out area (4) and the green value read out area (8)) are designated and subjected to a readout thereby performing partial signal reading.

Re claim 13, Neter discloses in figures 2 and 8-10 an image pickup apparatus (122), comprising: an image pickup area (CMOS image sensor) including pixels (190,192,194,196) arranged in horizontal and vertical directions, vertical output lines to which signal of pixels are read out and a horizontal output line to which signals from the vertical output lines are read out; a driver circuit (240) for controlling transistors in an image pickup area to effect a first read-out mode (256,258) for reading signals of pixels (G) contained in a first image pickup area (corresponding to G pixels) in said image pickup area, through addition of n (8) pixels to the horizontal output line and a second read-out mode (252,254) for reading signals of pixels (R) contained in a second image pickup area (corresponding to R pixels) smaller than the first image pickup area, through addition of m (4) pixels with addition to the horizontal output line; and an exposure control circuit (166,156) which comprises an amplifier circuit which is

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arranged to control an amplification factor of the signals read out from the first (G) and second (R) image pickup areas respectively, in accordance with the first and second read-out modes (col. 11, line 33-col. 12, line 37). Neter states that the acts of block (253) are performed in a sequence wherein the read circuit (240) sums, amplifies and outputs a red value (second read-out mode) and then sums, amplifies and outputs a green value (first read-out mode) and then sums, amplifies and outputs a blue value (col. 12, lines 4-8). Therefore, it can be seen that two different sized areas (corresponding to the red value read out area (4) and the green value read out area (8)) are designated and subjected to a readout thereby performing partial signal reading.

Re claim 14, Neter discloses in figures 2 and 8-10 an image pickup apparatus (122), comprising: an image pickup area (CMOS image sensor) having a plurality of pixels (190,192,194,196); an analog/digital converter (118) for converting a signal read out from the image pickup area into a digital signal (col. 7, lines 51-58; col. 8, lines 15-24); a processing circuit (126) for processing digital signals which are output from the analog/digital converter (118) and correspond to signals read out in a first read-out mode (256,258) for reading signals of pixels (G) contained in a first image pickup area (corresponding to G pixels) in said image pickup area, through addition of n (8) pixels, and having a second read-out mode (252,254) for reading signals of pixels (R) contained in a second image pickup area (corresponding to R pixels) smaller than the first image pickup area, through addition of m (4) pixels with addition; and an exposure control circuit (166,156) which comprises an amplifier circuit which is arranged to

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control an amplification factor of the signals read out from the first (G) and second (R) image pickup areas respectively, in accordance with the first and second read-out modes (col. 11, line 33-col. 12, line 37). Neter states that the acts of block (253) are performed in a sequence wherein the read circuit (240) sums, amplifies and outputs a red value (second read-out mode) and then sums, amplifies and outputs a green value (first read-out mode) and then sums, amplifies and outputs a blue value (col. 12, lines 4-8). Therefore, it can be seen that two different sized areas (corresponding to the red value read out area (4) and the green value read out area (8)) are designated and subjected to a readout thereby performing partial signal reading.

Re claim 15, see claim 12.

Re claim 2, Neter states that the image pickup area includes a common output (146,180) to which signal of a plurality of pixels are read and output sequentially, and wherein a read circuit reads signals through addition of n (8) pixels (G) to the common output (146,180) in the first read-out mode, and reads signals through addition of m (4) pixels (R) to the common output (146,180) in the second read-out mode (col. 11, line 67-col. 12, line 8).

Re claim 3, Neter states that a read circuit performs addition of n (8) pixels (G) in the common output unit in the first read-out mode (col. 11, lines 57-67).

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Re claim 4, Neter discloses an analog/digital converter (118) which converts a signal read from the image pickup area into a digital signal (col. 7, lines 51-58; col. 8, lines 15-24), wherein the image pickup area includes a common output (146,180) to which signals of a plurality of pixels are read out sequentially and whose output is supplied sequentially to the analog/digital conversion circuit (118) (col. 11, line 67-col. 12, line 8), wherein a read circuit reads out digital signals through addition of n (8) pixels (G) in a first-readout mode, and wherein a read circuit reads out digital signals through addition of m (4) pixels (R) with addition in a second read-out mode (col. 11, line 33-col. 12, line 37).

Re claim 5, Neter discloses in an embodiment of the invention an image data processing circuit (624) which processes signals read by a read circuit in the in both the first and second read-out modes (R,G) (col. 18,lines 13-23).

Re claim 6, Neter states that the number of signals read by the read circuit in the first read-out mode is approximately equal to the number of signals read by the read circuit in the second read-out mode since a 4x4 group of pixels (232) is read out in both modes (col. 11, lines 50-67).

Re claim 8, Neter states that the image pickup apparatus (122) includes a lens (102) for focusing light upon an image pickup area; and an image data processing

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circuit (106) which forms a luminance signal and color signals by processing signals read from an image pickup area (col. 8, lines 15-24).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neter in view of Kaji US 5,838,370.

Re claim 7, Neter discloses all of the limitations of claim 12 above, however the reference does not expressly disclose an exposure control circuit which stores an exposure evaluation value and a focus evaluation value and uses the exposure evaluation value and the focus evaluation value for an exposure and focus control in accordance with designation of either a first or second read-out mode or in accordance with designation of the first and second image pickup areas.

Kaji discloses in figure 1 a video camera with an electronic zoom function. The camera includes a first readout mode for reading out a normal image and a second readout

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mode for reading out an electronically zoomed image that is magnified (col. 6, line 33 – col. 7, line 13). It can be seen in figures 3A-3D that the first image pickup area corresponding to a normal image (Figs. 3A,3C) has a larger number of pixels than the second image pickup area corresponding to an electronically zoomed image (Figs. 3B,3D) (col. 5, lines 40-55). Kaji states that the exposure control circuit (19) stores an exposure evaluation value and a focus evaluation value for the image pickup area and uses the exposure evaluation value and focus evaluation value for an exposure control and a focus control in accordance with designation of either the first (normal) or second (electronic zooming; magnification) modes (col. 6, line 33 – col. 7, line 13). Therefore, it would have been obvious for one skilled in the art to have been motivated to include an exposure control circuit for performing exposure and focus control in accordance with designation of either a first or second read-out mode or in accordance with designation of the first and second image pickup areas as disclosed by Kaji in the image pickup apparatus including first and second readout modes as disclosed by Neter. Doing so would provide a means for performing an exposure control during an electronic zoom function in order to obtain a proper image (Kaji: col. 1, lines 59-67).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is **(571) 272-7312**. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on **(571) 272-7593**. The fax phone number for submitting all Official communications is **(703) 872-9306**. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at **(571) 273-7312**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ



DAVID OMETZ
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